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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/679,072

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Rodney Fulton

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7590

12/26/2007

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EXAMINER

KWIECINSKI, RYAN D

ART UNIT

PAPER NUMBER

3635

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/679,072	Applicant(s) FULTON ET AL.	
	Examiner Ryan D. Kwiecinski	Art Unit 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 17-19 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 15, 16, 21 and 23 is/are rejected.
- 7) ☒ Claim(s) 10-12, 17-19 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/14/2007</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Exhibit X and Exhibit Y</u> . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 November 2007 has been entered.

Claim Objections

Claims 10-12, 17-19, and 22 are objected to because of the following informalities:

The above claims should have the claim identifier --(Withdrawn)-- in place of the current claim identifier "(Original)", since there was an election of species in the original action.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,5-9,13,15, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,299,399 to Baier et al. in view of US 5,993,925 to Zoccole.

Claim 1:

Baier et al. disclose an apparatus for venting ornamental windows covered by a protective panel comprising:

- a) a window (14, Fig.2);
- b) a protective panel (32, Fig.2);
- c) a framing element (K, Exhibit X);
- d) at least one airspace between said window and said protective panel (34, Fig.2);
- e) venting means (40, Fig.2) comprising an entry vent opening (B, Exhibit X) and an exit vent opening (Column 3, lines 13-15) vertically spaced above (Column 3, lines 13-15, the exit vent is in the corner above the entry vent) and on the outside of the apparatus;
- f) said entry vent opening comprising a first path (A, Exhibit X) causing a first directional turn upwards and a first interior vent opening (C, Exhibit X) to said airspace, said exit vent opening comprising a second path and a second interior vent opening to said airspace for facilitating upwards airflow in said airspace.

Baier et al. also discloses entry vent openings and exit vent openings on the outside of the apparatus (Fig.6).

Baier et al. does not disclose a stained glass window.

Zoccole discloses a stained glass window (10, Fig.2) with a protective panel.

It would have been obvious to construct the apparatus of Baier et al. with the venting means openings on the outside of the apparatus in order to allow the openings to be in direct contact with the surrounding atmosphere. This will enable a sufficient amount of air to enter and exit the vent openings. The air enters the vent and makes a first turn upwards and the second turn into the airspace.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the venting apparatus with a stained glass window. Stained glass windows because of their physical make up are susceptible to moisture and dirt decay and venting stained glass windows is well known in the art. The stained glass window will add an aesthetic appearance to the window assembly.

With the patent disclosing the structure of a vent in each of the four corners of the framed window, each opening vent pairs with an identical exiting vent. This will be true throughout the entire action when referring to the exit portion of the vents.

Claim 2:

Baier et al. in view of Zoccole disclose an apparatus for venting ornamental windows as claimed in claim 1, Baier et al. also discloses wherein each said entry vent opening further comprises a first area (D, Exhibit Y), said exit vent opening further comprises a second area; said first interior vent opening comprises a third area (E, Exhibit Y) and said second interior vent opening comprises a fourth area; said first path comprises a first cross sectional area (F, Exhibit Y); said second path comprises a second cross sectional area; said first area at least equals said first cross sectional area and said first cross sectional area does not exceed said third area (Referring back to Exhibit X, first area equals the first cross sectional area and the third area exceeds the first cross sectional area); and said second area at least equals said second cross sectional area and said second cross sectional area does not exceed said fourth area for facilitating adequate rate and volume or airflow.

Claim 3:

Baier et al. in view of Zoccole disclose an apparatus for venting ornamental windows as claimed in claim 2, but does not teach where said first area equals at least one square inch for each about 2000 to 2500 square inches of ornamental window to be vented.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have created Baier's vent openings and paths large enough to effectively allow air to circulate through the inner space of an ornamental window. For a larger window, there clearly needs to be either larger

vent openings or a larger number of vent openings to properly circulate the air through the airspace to prevent moisture from building up in the airspace. The size of the vent opening in comparison to the ornamental window and protective panel was an obvious design choice.

Claim 5:

Baier et al. in view of Zoccole disclose an apparatus for venting ornamental windows as claimed in claim 1, Baier et al. also discloses wherein said first interior vent opening is spaced vertically above said entry vent opening to prevent entry of rainwater into said air space (Exhibit X).

Claim 6:

Baier et al. discloses an apparatus for venting ornamental windows covered by a protective panel comprising:

- a) a window (14, Fig.2);
- b) a protective panel (32, Fig.2);
- c) a framing element (K, Exhibit X);
- d) at least one airspace between said window and said protective panel (34, Fig.2);
- e) venting means (40, Fig.2) comprising a plurality of pairs (Column 3, lines 13-15) of vent openings each said pair with an exit vent spaced vertically above an entry vent opening, said entry vent opening (B, Exhibit X) having a first area (D, Exhibit Y) and said exit vent opening having a second area;

f) each said entry vent opening comprises a first path (A, Exhibit X) and a first interior opening (C, Exhibit Y) and each said exit vent opening comprises a second interior opening and a second path; and

g) for each said entry vent opening, said first interior opening comprises a third area (E, Exhibit Y) and for each said exit vent opening, each said second interior opening comprises a fourth area, each said first path comprises a first cross-sectional area (F, Exhibit Y) and each said second path comprises a second cross-sectional area.

Baier et al. also discloses entry vent openings and exit vent openings on the outside of the apparatus (Fig.6).

Baier et al. does not disclose a stained glass window nor does he disclose the vents being located in the vertical member of the frame.

Zoccole discloses a stained glass window (10, Fig.2).

It would have been obvious to construct the apparatus of Baier et al. with the venting means openings on the outside of the apparatus in the vertical members of the frame in order to allow the openings to be in direct contact with the surrounding atmosphere. This will enable a sufficient amount of air to enter and exit the vent openings. Also since it is obvious to place the openings on the outside of the apparatus, the vent now cause the air to make three directional turns, the air entering the vent, the air turning upward inside of the vent, and the air turning into the air space between the panes. Placing the vent openings in the vertical frame as opposed to the horizontal frame will eliminate the forces in

the horizontal direction exerted on the holes formed in the horizontal rail frame members creating a sturdier window assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the venting apparatus with a stained glass window. Stained glass windows because of their physical make up are susceptible to moisture and dirt decay and venting stained glass windows is well known in the art. The stained glass window will add an aesthetic appearance to the window assembly.

Claim 7:

Baier et al. in view of Zoccole disclose an apparatus for venting ornamental windows as claimed in claim 6, Baier et al. also discloses wherein for each said entry vent opening, said first area at least equals first cross sectional area and said first cross sectional area does not exceed said third area, but does not teach wherein a sum of all said first areas is at least one square inch for every 2000-2500 square inches of ornamental window for facilitating adequate rate and volume of airflow.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have created Baier's vent openings and paths large enough to effectively allow air to circulate through the inner space of an ornamental window. For a larger window, there clearly needs to be either larger vent openings or a larger number of vent openings to properly circulate the air through the airspace to prevent moisture from building up in the airspace. The

size of the vent opening in comparison to the ornamental window and protective panel was an obvious design choice.

Claim 8:

Baier et al. in view of Zoccole disclose an apparatus for venting ornamental windows as claimed in claim 7, Baier et al. also discloses wherein for each said exit vent opening, said fourth area at least equals said second cross sectional area and said second cross sectional area does not exceed said second area (Exhibit X and Y).

Claim 9:

Baier et al. discloses an apparatus for venting ornamental windows covered by a protective panel comprising:

- a) a window (14, Fig.2);
- b) a protective panel (32, Fig.2);
- c) at least one framing element (K, Exhibit X);
- d) at least one airspace between said window and said protective panel (34, Fig.2);
- e) venting means (40, Fig.2) comprising at least one pair of vent openings (Column 3, lines 13-15) each pair comprising an entry vent opening (B, Exhibit X) having a first area (D, Exhibit Y) and an exit vent opening having a second area and spaced vertically above (Column 3, lines 13-15, the exit vent is in the corner above the entry vent) said entry vent opening;

f) each said entry vent opening comprises a first proximal path (A, Exhibit X) having a first proximal cross section (F, Exhibit Y), a first inside opening (G, Exhibit X), a first distal path (H, Exhibit X) having a first distal cross section (I, Exhibit Y) and a first interior opening (C, Exhibit X) all for allowing air to flow into said airspace and each said exit vent opening comprises a second proximal path having a second proximal cross section, a second inside opening, a second distal path having a second distal cross section and a second interior opening all for allowing air to flow out of said airspace',

g) said first interior opening comprises a third area (E, Exhibit Y) and said second interior opening comprises a fourth area;

h) said first inside opening comprises a fifth area (J, Exhibit Y) and said second inside opening comprises a sixth area;

i) for each said entry vent opening, said first area does not exceed said first proximal cross sectional area, said fifth area at least equals said first proximal cross sectional area, said first distal cross sectional area at least equals said fifth area, and said third area at least equals said first distal cross sectional area (Exhibit X shows the widths of the paths and opening which correspond with the structure in claim 9); and

j) for each said exit vent opening, said fourth area does not exceed said second distal cross sectional area, said sixth area at least equals said second distal cross sectional area, said second proximal cross sectional area at least equals said sixth area and said second area at least equals said second proximal

cross sectional area for facilitating adequate rate and volume of flow to minimize the effects of extreme temperatures and of bacterial damage.

Baier et al. also discloses entry vent openings and exit vent openings on the outside of the apparatus (Fig.6).

Baier et al. does not disclose a stained glass window.

Zoccole discloses a stained glass window (10, Fig.2) with a protective panel.

It would have been obvious to construct the apparatus of Baier et al. with the venting means openings on the outside of the apparatus in order to allow the openings to be in direct contact with the surrounding atmosphere. This will enable a sufficient amount of air to enter and exit the vent openings. Also since it is obvious to place the openings on the outside of the apparatus, the vent now cause the air to make three directional turns, the air entering the vent, the air turning upward inside of the vent, and the air turning into the air space between the panes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the venting apparatus with a stained glass window. Stained glass windows because of their physical make up are susceptible to moisture and dirt decay and venting stained glass windows is well known in the art. The stained glass window will add an aesthetic appearance to the window assembly.

Claim 13:

Baier et al. in view of Zoccole discloses the apparatus for venting ornamental windows as claimed in claim 9, Baier et al. also discloses wherein said at least one framing element is a perimeter frame which holds only said protective panel (K, Exhibit X) and said airspace is defined by a separation between said protective panel and said ornamental window.

Claim 15:

Baier et al. in view of Zoccole discloses the apparatus for venting ornamental windows as claimed in claim 9, Baier et al. also discloses wherein at least one of said entry vent openings includes a debris deterring accessory (36, Fig.2 or 72, Fig.13).

Claim 21:

Baier et al. in view of Zoccole discloses the apparatus for venting ornamental windows as claimed in claim 9, Baier et al. also discloses wherein at least one of said entry vent openings includes a debris deterring accessory (36, Fig.2 or 72, Fig.13).

Claims 4, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,299,399 to Baier et al. in view of US 5,993,925 in view of USPN 4,656,803 to Chludil.

Claim 4:

Baier et al. in view of Zoccole discloses the apparatus for venting ornamental windows as claimed in claim 9, but does not disclose wherein said entry vent opening is covered by a screen such that it has an effective first area of 66% such that said first area at least equals 1.66 square inches for each about 2000 to 2500 square inches of ornamental window.

Chludil teaches wherein said entry vent opening is covered by a screen (Fig.2) such that it has an effective first area of 66% such that said first area at least equals 1.66 square inches for each about 2000 to 2500 square inches of ornamental window.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered Baier's venting means with a screen to deter debris and insects from entering the vent openings. Using a screen to deter debris and insects from entering an opening is notoriously well known in the art and would have been an obvious design choice. It would have also been obvious to have created Baier's vent openings and paths large enough to effectively allow air to circulate through the inner space of an ornamental window. For a larger window, there clearly needs to be either larger vent openings or a larger number of vent openings to properly circulate the air through the airspace to prevent moisture from building up in the airspace. The size of the vent opening in comparison to the ornamental window and protective panel was an obvious design choice.

Claims 16 and 23:

Baier et al. in view of Zoccole discloses the apparatus for venting ornamental windows as claimed in claim 9 and as claimed in claim 13, but does not disclose wherein said debris deterring accessory is a screen or further comprising at least one screen proximal one of said entry vent openings for deterring entry of debris.

Chludil teaches wherein said debris deterring accessory is a screen (Fig.2) or further comprising at least one screen proximal one of said entry vent openings for deterring entry of debris (S, Fig.1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered Baier's venting means with a screen to deter debris and insects from entering the vent openings. Using a screen to deter debris and insects from entering an opening is notoriously well known in the art and would have been an obvious design choice.

Response to Arguments

Applicant's arguments filed 14 November 2007 have been fully considered but they are not persuasive.

The documents filed in the recent IDS have been considered and are not considered persuasive to overcome the rejection. The documents simply state that there is a need to ventilate stained glass windows of older structures such as churches, since the chemical make-up of the windows are greatly affected by moisture. Section V of the Protective Glazing Study actually discloses that many different factors are

considered when studying to find out if the ventilation is appropriate for the window. It goes on to talk about how there are different thoughts about the effects of the size of the window openings (page 98, paragraph 2). Further the study shows that "venting needs of particular windows may vary greatly. The amount of venting required is dependent on the window's micro-environment" and also "there are no set specifications to determine the exact amount of venting. One must use common sense, and be willing to constantly review the results of past work." (Page 99, Paragraph 5). Nowhere in the documents does it disclose the size of the vents that the Applicant claims to be critical.

Applicant argues that the vents in Baier et al. do not facilitate upward airflow. The vents in Baier et al. may be located in the horizontal rail member of the window frame, but they are directed to facilitate airflow upwards, obviously if air is directed through the air vent which is pointed in the upwards direction then the air will flow upward once inside of the airspace. It would also have been an obvious point of design to form the air vents in the corners of the frame, in the vertical frame members to reduce stresses on the horizontal members which are being weight from the windows themselves.

Applicant argues that Baier et al. does not teach directly venting to the outside air. Although in one embodiment, the window assembly has a glazing retainer that is placed over top of the vent opening, the vent opening still acts directly with the outside air. Air comes into the chamber between the frame and the glazing retainer and flows through the vent opening. Also Baier et al. discloses in Fig.6 from the prior art, a vent

opening that is not covered by a glazing retainer, which Applicant considers "directly venting outside air".

Applicant further argues that the vent openings are too narrow to facilitate a correct amount of airflow. The vent openings will be large enough to effectively vent the windows associated with the vent system of Baier et al.

Applicant goes on to argue about the size of the vent openings and the areas of the passageways of the vents. Baier et al. disclose the ratio of the areas recited in claims 2 and 7, but they do not directly disclose the ratio of the sizes of the vents to the size of the window. This is an obvious design choice, the vent openings and paths of the vent should be large enough to effectively allow air to circulate through the inner space of an ornamental window. For a larger window, there clearly needs to be either larger vent openings or a larger number of vent openings to properly circulate the air through the airspace to prevent moisture from building up in the airspace. Further Protective Glazing Study submitted with the IDS clearly shows that many different factors are considered when studying to find out if the ventilation is appropriate for the window. It goes on to talk about how there are different thoughts about the effects of the size of the window openings (page 98, paragraph 2). Further the study shows that "venting needs of particular windows may vary greatly. The amount of venting required is dependent on the window's micro-environment" and also "there are no set specifications to determine the exact amount of venting. One must use common sense, and be willing to constantly review the results of past work." (Page 99, Paragraph 5). Therefore Applicant's arguments are not persuasive and the rejection is upheld.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Kwiecinski whose telephone number is (571)272-5160. The examiner can normally be reached on Monday - Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Canfield can be reached on (571)272-6840. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


RDK

Robert Canfield
Primary Examiner

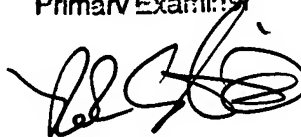


EXHIBIT X

APPL # 10/679,072

